



Alternative Composite Liner Construction Certification

Retrofitted South Pond - Bottom Ash CCR Impoundment

Issue Purpose: For Use, Rev. 0
Issue Date: March 7, 2022

S&L Project No.: 13770-006

PREPARED BY:



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1 PURPOSE

In accordance with 40 CFR 257.72(d) this document provides the certification for the constructed alternative composite liner for the South Pond of the existing Bottom Ash Pond Complex (BAPC) at the Cardinal Power Plant. Upon completion of the retrofit, the South Pond's name was changed from the former "Recirculation Pond" to the retrofitted "Bottom Ash Pond."

2 APPLICABLE CCR REGULATION

To demonstrate compliance of the new composite liner system for the retrofitted Bottom Ash Pond, the following excerpts from 40 CFR Part 257 Subpart D ("Federal CCR Rule") are applicable:

- **§257.72(a):**
New CCR surface impoundments...must be designed, constructed, operated, and maintained with either a composite liner or an alternative composite liner that meets the requirements of §257.70(b) or (c).
- **§257.72(b):**
Any liner specified in this section must be installed to cover all surrounding earth likely to be in contact with CCR. Dikes shall not be constructed on top of the composite liner.
- **§257.72(d):**
Upon completion [of installation], the owner or operator must obtain a certification from a qualified professional engineer that the composite liner or if applicable, the alternative composite liner has been constructed in accordance with this section.

3 DEMONSTRATION

The alternative composite liner construction of the retrofitted Bottom Ash Pond is compliant with the referenced regulations as demonstrated by the following:

- The design of the alternative composite liner complies with the requirements of 40 CFR 257.72 (See "*Alternative Composite Liner Design Certification, Retrofitted South Pond Bottom Ash CCR Impoundment*," dated April 8, 2021)
- The installation of the alternative composite liner was performed in accordance with the design specifications as documented by S&ME's certification.
- The alternative composite liner has been installed to cover all surrounding earth likely to be in contact with CCR.
- No dikes were constructed on top of the composite liner.

4 CERTIFICATION

I certify that

- The Cardinal Operating Company has completed the installation of the alternative composite liner for the retrofitted Bottom Ash Pond at the Cardinal Power Plant,
- The alternative composite liner has been constructed in accordance with 40 CFR 257.72, and
- I am a registered professional engineer under the laws of the State of Ohio.

Certified by: James T. Perry Date: March 7, 2022

